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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT LOUIS COBENE II

Appeal 2009-011939
Application 10/621,489
Technology Center 1700

Before BRADLEY R. GARRIS, LINDA M. GAUDETTE, and
MELANIE L. MCCOLLUM, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL¹

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision² finally rejecting claims 26-28, 32, and 33.³ We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

The claimed invention is directed to a method of binding an assembly of plural sheets with a backed hot melt adhesive sheet to form a book-like structure. (*See, e.g.*, Spec.⁴ [0008].)

Appellant requests review of the following grounds of rejection (App. Br. 3-4) maintained by the Examiner:

1. Claims 26-28 under 35 U.S.C. § 103(a) as unpatentable over Morishige⁵ in view of Boss⁶ and Capriz⁷ or Colbert⁸ (Ans.⁹ 3-5);
2. Claims 32 and 33 under 35 U.S.C. § 103(a) as unpatentable over Morishige in view of Boss and Capriz or Colbert, and further in view of Kuramoto¹⁰ (Ans. 6);
3. Claims 26-28 under 35 U.S.C. § 103(a) as unpatentable over Yamanaka¹¹ in view of Boss, Clark¹², and Capriz or Colbert (Ans. 7-9); and

² Final Office Action ("Final") mailed Jun. 18, 2008.

³ Appeal Brief ("App. Br.") filed Oct. 24, 2008.

⁴ Specification filed July 18, 2003.

⁵ US 5,246,325, issued Sep. 21, 1993.

⁶ US 2001/0019691 A1, published Sep. 6, 2001.

⁷ US 2002/0167795 A1, published Nov. 14, 2002.

⁸ US 6,385,044 B1, issued May 7, 2002.

⁹ Examiner's Answer mailed Jan. 23, 2009.

¹⁰ US 2002/0064437 A1, published May 30, 2002.

¹¹ US 6,024,525, issued Feb. 15, 2000.

¹² US 5,871,323, issued Feb. 16, 1999.

4. Claims 32 and 33 under 35 U.S.C. § 103(a) as unpatentable over Yamanaka in view of Boss, Clark, and Capriz or Colbert, and further in view of Kuramoto (Ans. 10).

Appellant traverses all four grounds of rejection on the basis of limitations found in claim 26, the sole independent claim. (*See generally*, App. Br. 4-13.) Accordingly, the remaining claims subject to this appeal stand or fall with claim 26, which is reproduced below from the Claims Appendix to the Appeal Brief:

26. A method of binding an assembly of plural sheets to form a book-like structure, the method comprising:

contacting a translatable first contacting surface to a backed hot melt adhesive sheet located on a spine surface of the assembly of plural sheets, the spine surface being perpendicular to a planar surface of the assembly of plural sheets;

applying force with at least a translatable second contacting surface to the planar surface in an area where the backed hot melt adhesive sheet contacts the planar surface; and

actively withdrawing heat from the backed hot melt adhesive sheet using a heat sink based on an active cooling device, which is one of a Peltier device, a device having an internal circulating medium, and a device based on a Joule-Thomson effect, to bring a temperature of a hot melt adhesive of the backed hot melt adhesive sheet from above a glass transition temperature of the hot melt adhesive to below the glass transition temperature of the hot melt adhesive, wherein at least the translatable first contacting surface has an angled leading edge adapted to contact a protruding end portion of the backed hot melt adhesive sheet at an offset angle.

We affirm all four grounds of rejection based on the facts and reasons relied on by the Examiner in the Final and Answer, which we adopt as our own.

BACKGROUND AND ISSUE

Appellant argues, in general, that the applied prior art, alone or in combination, fails to teach or suggest all of the limitations of the “actively withdrawing heat” step of claim 26. (*See generally*, Ans. 4-13.) Focusing on this step, Appellant has presented detailed arguments directed to the Examiner’s findings and conclusions as to the limitation: “a heat sink based on an active cooling device, which is one of a Peltier device, a device having an internal circulating medium, and a device based on a Joule-Thomson effect.” However, Appellant has failed to explain, with any degree of specificity, why the Examiner erred in finding that the applied prior art discloses or suggests the remaining limitations recited in the “actively withdrawing heat” step.¹³ In our view, the Examiner properly identified a teaching or suggestion of each of the recited claim limitations. (Final 2-4, 6-

¹³ In the Reply Brief (“Rep. Br.” filed Mar. 23, 2009), Appellant raises arguments directed to the “planar surface” limitation (Rep. Br. 3) which were not previously presented in the Appeal Brief. It is not apparent to us (*compare* Final 2 with Ans. 3), nor has Appellant explained, why these arguments were not raised in the Appeal Brief. Arguments not timely made have been waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (second sentence); *In re Hyatt*, 211 F.3d 1367, 1373 (Fed. Cir. 2000) (an argument not first raised in the brief to the Board is waived on appeal). Accordingly, we will not consider the arguments made on page 3 of the Reply Brief. *Ex parte Borden*, 93 USPQ2d 1473, 1477 (Bd. Pat. App. & Int. 2010) (nonprecedential) (“Properly interpreted, the Rules do not require the Board to take up a belated argument that has not been addressed by the Examiner, absent a showing of good cause.”).

8; Ans. 3-5, 7-9; *see also*, Ans. 11-14.)¹⁴ Accordingly, we determine that the sole issue presented for our consideration is:

Did the Examiner rely on improper hindsight reasoning in determining that it would have been obvious to have used a liquid-cooled type heat sink in the bookbinding methods of Morishige and Yamanaka?

We answer this question in the negative for the reasons explained in the Answer and expanded upon below.

FINDINGS OF FACT

The Examiner concedes that the primary references, Morishige and Yamanaka, fail to explicitly teach the use of a heat sink based on an active cooling device as claimed. (Ans. 4 (finding that Morishige teaches cooling the hot melt adhesive “via an unshown cooling means”) and 7 (finding that Yamanaka is silent as to including an active cooling member within the clamping jaw); *cf.* Rep. Br. 2 (citing Morishige, col. 6, ll. 49-52, for a teaching of using a fan for forced cooling).) The Examiner thus turns to Boss for a teaching of an “actively cooled heat sink” used in “a method of binding a plurality of sheets to form a book-like structure” (Ans. 4-5, 7-8 (relying on element 30 of Boss Figure 2).) Boss describes heat sink 30 as “a highly thermally conductive material such as an aluminum block or a forced air convection type heat exchanger.” (Boss ¶ [0021].) The Examiner relies on Capriz to establish that “a heat sink having an internal circulating medium for cooling is more efficient than a heat sink that is air cooled by natural or forced convection.” (Ans. 4, 9 (citing Capriz ¶ [[0005] (“Heat sinks . . . of the liquid-cooled type . . . are used when the heat transfer system

¹⁴ *E.g.*, Final 2, 8 and Ans. 3, 9 (findings and conclusions as to the limitations “angled leading edge” and “offset angle”).

is required to be much more efficient than systems based on air cooling, whether by natural or forced convection.”)).) The Examiner relies, in the alternative, on Colbert, which teaches that a liquid cooled heat sink is a suitable alternative to a heat sink made of a thermally conductive material. (Colbert, col. 5, ll. 12-19, cited on pp. 4, 9 of the Ans.)

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to use a heat sink as the cooling means in Morishige, since the use of a heat sink for rapid heating and cooling is known in the bookbinding art as shown by Boss. (Ans. 5.) The Examiner similarly concludes that it would have been obvious to include within Yamanaka’s clamping jaw “an active cooling member such as an actively cooled heat sink as shown by Boss to allow rapid heating and cooling of the assembly, and thus, decrease the time required for binding.” (Ans. 8.) The Examiner maintains the use of a heat sink having an internal circulating medium would have been obvious because Capriz and Colbert evidence that this type of heat sink is more efficient than a heat sink which is air cooled by natural or forced convection. (Ans. 5 and 9.)

Appellant concedes that Boss discloses the use of “a cooling device in which cooling is achieved by convection using moving air.” (Rep. Br. 2 (also conceding that Morishige discloses the use is this type of cooling device).) However, Appellant argues that Capriz and Colbert are not directed to bookbinding and, therefore, the Examiner relied on impermissible hindsight in determining that one of ordinary skill in the art would have been motivated to use Capriz’s or Colbert’s heat sinks, i.e., a heat sink having an internal circulating medium, in the methods of Morishige and Yamanka, as modified by Boss. (App. Br. 7 (“[Capriz and

Colbert] merely stand[s] for the liquid-cooled heat sink as described, and do not relate specifically to Appellant's claimed use of a heat sink based on an active cooling device.") and 11-12 (repeating this argument in traversing the third ground of rejection); *see also*, Rep. Br. 2-5.)

PRINCIPLES OF LAW

"Common sense teaches . . . that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007). "[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *Id.* at 417. *Cf. In re ICON Health and Fitness, Inc.*, 496 F.3d 1374, 1379-80 (Fed. Cir. 2007) (determining that springs used in a folding bed were reasonably pertinent to an inventor developing a treadmill with a folding mechanism); *In re Paulsen*, 30 F.3d 1475, 1481-82 (Fed. Cir. 1994) (determining that housings, hinges, latches, and springs found in items like a piano lid and kitchen cabinet were reasonably pertinent to the development of a latch system for personal computers).

ANALYSIS

Having considered Appellant's argument in light of the relevant case law, we are not persuaded that the Examiner relied on improper hindsight in determining the claimed invention would have been obvious over Morishige in view of Boss and Capriz or Colbert, or over Yamanaka in view of Boss, Clark, and Capriz or Colbert. While it is true that Capriz and Colbert are directed to the cooling of electronic components, Appellant has not

explained why the Examiner erred in finding that the ordinary artisan would, nonetheless, have looked to Capriz or Colbert in considering the type of heat sink to use in a bookbinding method (*see* Ans. 14). *See In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992) (noting that a reference is considered analogous art if “even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem”). Appellant has not explained why the ordinary artisan, upon considering the teachings of Capriz or Colbert, would not have reasonably expected to achieve the same advantageous results in the Morishige (as modified by Boss) and Yamazaki (as modified by Boss and Clark) bookbinding methods by replacing the forced air convection type heat sink of Boss with a liquid-cooled type heat sink. *See KSR*, 550 U.S. at 520.

CONCLUSION

For the foregoing reasons, we are not persuaded the Examiner relied on improper hindsight reasoning in determining that it would have been obvious to have used a liquid-cooled type heat sink in the bookbinding methods of Morishige and Yamanaka.

The following grounds of rejection are affirmed:

1. Claims 26-28 under 35 U.S.C. § 103(a) as unpatentable over (a) Morishige in view of Boss and Capriz and (b) Morishige in view of Boss and Colbert;
2. Claims 32 and 33 under 35 U.S.C. § 103(a) as unpatentable over (a) Morishige in view of Boss and Capriz, and further in view of Kuramoto and (b) Morishige in view of Boss and Colbert, and further in view of Kuramoto;

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3. Claims 26-28 under 35 U.S.C. § 103(a) as unpatentable over (a) Yamanaka in view of Boss, Clark, and Capriz and (b) Yamanaka in view of Boss, Clark, and Colbert; and

4. Claims 32 and 33 under 35 U.S.C. § 103(a) as unpatentable over (a) Yamanaka in view of Boss, Clark, and Capriz, and further in view of Kuramoto and (b) Yamanaka in view of Boss, Clark, and Colbert, and further in view of Kuramoto.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED

kmm

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